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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,532	03/17/2004	Tsuyoshi Inagaki	249-331	2297

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EXAMINER

WOODWARD, ANA LUCRECIA

ART UNIT PAPER NUMBER

1711

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/801,532	Applicant(s) INAGAKI ET AL.	
	Examiner Ana L. Woodward	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on June 12, 2006
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Upon allowance of the claimed resin composition and pursuant to the procedures set forth in the Official Gazette notice dated March 26, 1996 (1184 O.G. 86), claims directed to the process of making or using the patentable product, previously withdrawn from consideration as a result of a restriction requirement, would be subject to being rejoined. Process claim 9, would at that time, be rejoined and fully examined for patentability under 37 CFR 1.104.

### ***Claim Rejections - 35 USC § 112***

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for compositions comprising carbon black as a component of the “conductive filler”, does not reasonably provide enablement for the presently claimed composition wherein the carbon black does not form part of the 50 to 80% by weight content governing the conductive filler. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

3. Claims 5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims depend upon canceled claims and, as such, are indefinite.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO02065567 (as translated by its English language equivalent EP 1351329) as per reasons of record.

WO '567 discloses a polymer electrolyte fuel cell that includes separator plates comprising a composition comprising a binder, conductive carbon particles and at least one of conductive carbon fine particles and micro-diameter carbon fibers. It is an object of the invention to provide separator plates having a low volume resistivity with the composition having good flowability. In example 2, the reference discloses a composition comprising 100 g of a liquid oligomer, 20 g of carbon nano-tubes with a fiber diameter of 10 to 30 nm, 100 g graphite powder, 50 g carbon black and 30 g graphite fiber. In said composition the total amount of conductive filler, i.e., carbon fiber, graphite powder, graphite fiber and carbon black is 200g (or about 66% by weight based on total composition) and the total amount of resin is 100 g (or about 33% by weight based on total composition).

It would have been obvious to one having ordinary skill in the art to have employed expanded graphite since the reference clearly states that it can be used (page 4, lines 55-57). It would be reasonable to conclude that said expanded graphite-containing embodiment, falling within the scope of the present claims both in terms of types of materials used and their contents, would enjoy the same resistance and fluidity governing applicants' product.

6. Claims 1, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1061597, as per reasons of record, in view of WO 02065567, described hereinabove.

EP '597 discloses a fuel cell separator comprising (a) about 100 pbw of graphitized meso-carbon microbeads, (b) about 10 to 35 pbw of a resin and (c) about 1 to 40 pbw of at least one carbonaceous material selected from the group consisting of graphite powder, carbon black and fine carbon fibers. As the graphite powder, the reference discloses that "any type of graphite may be used" (page 5, line9). In Tables 3 and 5, the reference discloses examples 7 and 13 compositions comprising between 30-35 pbw resin, 100 pbw graphitized meso-carbon microbeads, 10 pbw artificial graphite powder and between 15-20 pbw of carbon nano-tubes. In said compositions the total amount of conductive filler, i.e., carbon nano-tubes, graphite powder and graphitized meso-carbon microbeads is between 115-130 pbw (or about 80% by weight based on total composition) and the total amount of resin is between 30-35 pbw (or about 20% by weight based on total composition).

It would have been obvious to one having ordinary skill in the art to have employed an expanded graphite in the composition of EP '597 because expanded graphite is a well known graphite powder alternative in similar-such compositions (per WO '567) and since EP '597 clearly discloses that "any type of graphite may be used" satisfactorily. Accordingly, absent evidence of unusual or unexpected results relative to the use of expanded graphite powder, no patentability can be seen in the presently claimed subject matter.

#### ***Response to Arguments***

7. Applicant's amendments and arguments filed June 12, 2006 have been fully considered but are not persuasive.

Applicants' argument that the examples of WO '567 do not disclose the presently claimed electric resistance is noted. It should be noted, however, that the electric resistance

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reported in the tables of the reference do not pertain to the closest embodiment of the reference being relied on, i.e., example 2. Accordingly, applicants have not compared the closest embodiment of the prior art.

With respect to EP '597, applicants argue that they obtain the desired fluidity and injection moldability without the use of graphitized meso-carbon microbeads. The present claims, however, do not exclude any additional components by virtue of the "comprising" language.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

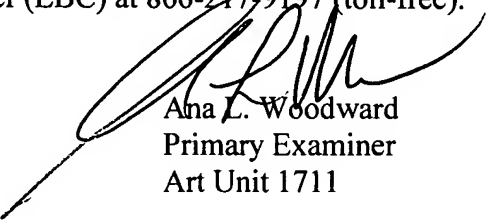
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana L. Woodward  
Primary Examiner  
Art Unit 1711

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